

Claims;

1. A method for forming an aqueous dispersion of colored microparticles comprising a pigment covered with a polymer, wherein the method comprises the steps of:

(a) mixing a hydrophilic colloid or a compound having a hydrophilic portion and a hydrophobic portion with a dispersion of the pigment particle to form a hydrophobic site which is capable of absorbing a monomer compound on a surface of the pigment;

(b) adding a monomer to the mixture obtained by the step (a); and

(c) adding a polymerization initiator to form the polymer on a surface of the pigment particle from the monomer.

2. A method of claim 1, wherein the compound having a hydrophilic portion and a hydrophobic portion to a dispersion of the pigment particle to form a mixture is used in step (a).

3. A method of claim 1, wherein the method further comprises steps after the step (c),

(d) adding another monomer having more hydrophilicity than that of the monomer used in the step of (c), and

(e) adding a polymerization initiator to form a polymer on a surface of the polymer on the pigment particles.

4. A method of claim 1, wherein a ratio A/B of a weight A of the polymer to a weight B of the pigment covered with the polymer is from 0.6 to 10.0.

5. A method of claim 1, wherein the pigment is an organic pigment or carbon black.

6. An aqueous dispersion of a colored microparticle comprising a pigment covered with a polymer, which is prepared by a method comprising the steps of:

(a) mixing a hydrophilic colloid or a compound having a hydrophilic portion and a hydrophobic portion with a dispersion of the pigment particle to form a hydrophobic site which is capable of absorbing a monomer compound on a surface of the pigment;

(b) adding a monomer to the mixture obtained by the step (a); and

(c) adding a polymerization initiator to form the polymer on a surface of the pigment particle from the monomer,

wherein a ratio A/B of a weight A of the polymer to a weight B of the pigment covered with the polymer is from 0.6 to 10.0.

7. An aqueous dispersion of colored microparticles of claim 6, wherein the aqueous dispersion comprises microparticles containing no pigment not more than 1.0% by weight based on the colored particles.

8. The aqueous dispersion of claim 6, wherein the composition of the polymer at the position contacting to the surface of the pigment and that at the outermost portion are different from each other.

9. The aqueous dispersion of claim 6, wherein the volume average diameter of the colored particles is within the range of from 10 nm to 200 nm.

10. The aqueous dispersion of claim 6, wherein the pigment is at least one selected from the group consisting of an azo dye, a quinacridone dye and a phthalocyanine dye.

11. An ink for ink-jet printing containing the aqueous dispersion of claim 6.

12. The ink for ink-jet printing of claim 11 wherein the viscosity of the ink is within the range of from 1.2 mPa·s to 15 mPa·s.

13. The ink for ink-jet printing of claim 11 wherein the surface tension of the ink is within the range of from 20 mN/m to 45 mN/m.

14. The ink for ink-jet printing of claim 11 wherein the pH value of the ink is within the range of from 6.0 to 11.0.

15. The ink for ink-jet printing of claim 11 wherein the content of an ink solvent is within the range of from 10% to 60% by weight based on the ink.

16. An ink-jet image forming method wherein an image is formed by using at least one ink of claim 11.

17. An ink-jet image forming method of claim 16 wherein an image is formed on a porous ink-jet recording medium.